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January 14, 2022

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Chicago, Illinois 60604

Mr. Brian Conrath
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Subject: Response to Comments on 2020 Annual Groundwater Management Zone (GMZ) Monitoring and System Performance Report
Hamilton Sundstrand Corporation Plant 1/2 Facility, Area 9/10 Remedial Action
Southeast Rockford Groundwater Contamination Superfund Site (ILD981000417)

Dear Ms. Knoepfle and Mr. Conrath:

On behalf of Hamilton Sundstrand Corporation (HSC), AECOM Technical Services Inc. (AECOM) has completed this response letter to the United States Environmental Protection Agency (USEPA) August 24, 2021 comment letter regarding the 2020 Annual Groundwater Management Zone (GMZ) Monitoring and System Performance Report (AECOM, 2021a) for the HSC Plant 1/2 Facility in Rockford, Illinois (Site).

The revision (submitted concurrently with this letter), includes (as appropriate) the responses noted below. The revision is entitled *Revised 2020 Annual Groundwater Management Zone Monitoring and System Performance Report* which is referred to as Revised 2020 Report, herein.

Comment 1: *To streamline this comment letter, please apply all appropriate comments from EPA's June 29, 2021 Review of First Quarter 2021 GMZ and System Performance Report (1Q 2021 Comment Letter) to the 2021 and future Annual GMZ Monitoring and System Performance Reports (Annual Report).*

Response: Agreed. All appropriate comments have been incorporated.

Comment 2: *As expressed in EPA's 1Q 2021 Comment Letter (General Comment #3) EPA is concerned about an unmitigated potential source (or sources) and its impact on elevated (greater than Maximum Contaminant Limits [MCLs]) groundwater concentrations along western GMZ 1 and 2 boundaries. Tetrachloroethene (PCE) has been largely persistent with little to no evidence of degradation particularly at GMZ01, SMW04, and SMW08. One potential source is the OSA where known PCE concentrations at depth (26 – 30 foot [ft] below ground surface [bgs]) exceed the preliminary remediation goal (PRG) for soil (60 ug/kg, soil component for protection of groundwater), which is also the same depth(s) for groundwater and is upgradient of GMZ01 and SMW08. There are also concentrations of PCE (40 – 60 ug/kg), although less than the PRG, as deep as 32 feet bgs in the OSA. A previous remedial action (RA) addressed OSA soils with a focus on shallow soils (e.g., 3 – 6 ft bgs) and infiltration (cap) the RA does not appear to address contaminated soil at depth and potential impacts on groundwater.*

Furthermore, it will also be telling if the air sparge/soil vapor extraction (AS/SVE) system area of influence is impacting or encompasses PMW01 and PMW02. Upcoming quarterly event results during system shutdown will provide information for further evaluation of this concept.

Alternative Cleanup Levels (ACLs) are discussed in this 2020 Annual Report. Prior to the Agencies making decisions regarding the development (and use) of ACLs, as presented in the Work Plan for the Development of Site-Specific Alternative Cleanup Levels (HSC 2017) and subsequent comment (EPA 2019) and response (HSC 2020) letters, the likelihood of an ongoing source (onsite) in (and/or immediately east of) OSA soils affecting groundwater, warrants further evaluation by HSC, and communication with the Agencies on an appropriate path forward to achieve MCLs at the western GMZ 1 and 2 boundaries. It is unclear why there is inconsistency in how (similar) contamination is addressed at the site; one part of the Site (southern boundary) is achieving MCLs with active treatment and the western boundary is not with a seemingly unmitigated source at depth and no active treatment (and no degradation to daughter products), yet an ACL is proposed.

Response: A Preliminary Conceptual Site Model (CSM) (AECOM, 2021b) has been developed and provided to USEPA that provides an evaluation of all known potential areas of concern historically exhibiting residual soil impacts that potentially affected leachate. Data gaps are identified and will be further investigated, as appropriate, in consultation with USEPA. HSC notes that degradation from parent compounds to daughter products have been observed in wells along the western boundary.

Comment 3: *Consider including an evaluation of water level impacts on contaminants of concern (COCs) at SA 9/10 in this and future Annual Reports. This could include long-term and short-term (i.e., that year's data) evaluation of groundwater level fluctuations, flow patterns (pre remedy and system pulse on/off affects) along with corresponding analytical data, and river stage data (hydrographs). Evaluating these types of fluctuations particularly with respect to the western wells, the OSA, and MCL exceedances may provide another line of evidence to sort out impacts along the western GMZ boundary.*

Response: Leachate elevations have been added to the graphs for each monitoring well on Figure 8 and 9 in the Revised 2020 Report. Fluctuations of the leachate elevations does not appear to have a significant influence on contaminant of concern concentrations.

Comment 4: *SMW19 is consistently above MCLs/PRGs for TCE. What is HSC's plan to meet remedial action objective (RAO) #3 for this area particularly since this well is upgradient of the AS/SVE area of influence and currently there is a plan to shutdown the AS/SVE system? EPA recommends HSC present a conceptual site model with a multiple lines of evidence assessment (groundwater flow direction, groundwater elevation fluctuations, degradation products, comparison to other known sources at SA 9/10, etc.) for this monitoring well/area to understand how this area impacts the remainder of SA 9/10 and what the source (if different, upgradient, or offsite) may be for these MCL/PRG exceedances.*

Response: The monitoring well SMW19 is located on the upgradient HSC property boundary. The Preliminary CSM provided to USEPA in October 2021 did not identify HSC related sources in this area. Historic and current groundwater flow direction near SMW19, demonstrates that directly upgradient to the HSC property is the former Mid-States Industrial facility (formerly Rockford Power Machinery), which is within Source Area 9/10 and was identified as a potential source in the Operable Unit Number 3 (OU3) Record of Decision (ROD) (EPA, 2002) (see page 29 of the OU3 ROD). Soil and leachate data from the former Mid-States Industrial facility has been reviewed by HSC and provided to USEPA (on August 5, 2021). Soil concentrations that exceed the soil to groundwater migration pathway criteria and leachate concentrations in excess of the OU3 ROD remedial action objective (RAO) #3 are documented in the historical data to exist on the Mid-States Industrial facility with the primary constituent of concern (COC) being trichloroethene (TCE). The Preliminary CSM identified potential sources within the HSC property with the primary COCs being tetrachloroethene and 1,1,1-trichloroethane.

Comment 5: ***Page 1-1. Paragraph 4. Last Sentence.*** *Revise (or remove) this sentence regarding "final leachate goals have not been established" to accurately portray the PRGs/MCLs per the Record of Decision (ROD) (EPA 2002) and Consent Decree (CD) (EPA 2008). At present, the leachate "goal" is to meet MCLs at the GMZ boundary and there is not necessarily any future change from that goal or as the sentence reads, a "final" goal.*

Please note: Per the ROD (EPA 2002), the GMZ boundary is the point of compliance for the source area. Specifically, "PRGs for leachate are based on federal MCLs and must be met at the GMZ Boundary", and the RAO states that the remedy will "prevent the further migration of contamination from the source area that would result in degradation of site-wide groundwater or surface water to level in excess of state or federal standards, or that pose a threat to human health or the environment." EPA recognizes that in Appendix C (Statement of Work) of the CD there is a statement, "The Performance Standards for each source area at the Hamilton Sundstrand Property shall be met by achieving numeric criteria described

in the ROD, or as applicable, as described below in this Section II.D.2." Section II.D.2 refers to the ACLs at the GMZ boundary, following the remedial action process flow diagram (RAPFD). However, currently we are not at this step (see General Comment #2 above). EPA also does not concur with HSC's assessment that leachate results at the western GMZ boundary 1 and 2 show "repeated and consistent asymptotic sampling results" as per the RAPFD (see EPA's 1Q 2021 Comment Letter and relevant specific comments below).

Response: The sentence has been removed. The purpose of the sentence was to note that Preliminary Remediation Goals (PRGs) are the remediation goal until the process described in Section II.D.2 of the consent decree is complete.

As discussed in Section 6.4 of the Revised 2020 Report the Mann-Kendall statistic was used to identify statistically significant, monotonic trends (*i.e.,* upward, no trend, or downward) in the historical concentration data of COCs that currently exceed PRGs at well locations along the GMZ western boundary. The analysis was used to demonstrate trends as "Stable" or "No Trend" which is indicative of repeated and consistent sampling results. The analysis demonstrated "Decreasing" trends as well; however, no increasing trends were identified.

While "Stable", "No Trend", and "Asymptotic" may not have the same exact meaning, they do have the same intent when applied to environmental cleanup; that the concentrations of a constituent are expected to be relatively consistent on average over the long term.

Comment 6: ***Page 1-2. Paragraph 1.*** *Refine the language in this paragraph. As commented in this and prior quarterly and annual reports, EPA does not concur that all the wells along the western boundary "continue to demonstrate stable or decreasing trends or no trends" and the interpretation of what a 'Stable' or 'No Trend' evaluation means. Also, include specific language such as "HSC believes that the development of ACLs is appropriate at this time".*

Response: The paragraph has been revised to specify that Mann-Kendall analysis was used to demonstrate trends. Additionally, a more detailed summary of the Mann-Kendall statistical analysis is included in Section 6.4 for the Revised 2020 Report. The paragraph was also revised to note that HSC believes that development of Alternative Cleanup Levels is appropriate at this time.

Comment 7: ***Page 2-2. Paragraph 2. Sentence 2.*** *Is there a standard operating procedure (SOP) or work plan that defines how long the system must be turned off to collect groundwater elevations, when the scheduled measurements are during a typical "pulse-on" mode? If so, please provide that reference. If not, please provide a best practice rationale for a minimum duration. Additionally, if 3 days is a deviation from a SOP, work plan, or best practice, please include that in a "Deviations and Uncertainties" section for these types of reports. That would also be applicable to identify any other deviations or uncertainties that would occur (e.g., stabilization parameters, power outages, etc.).*

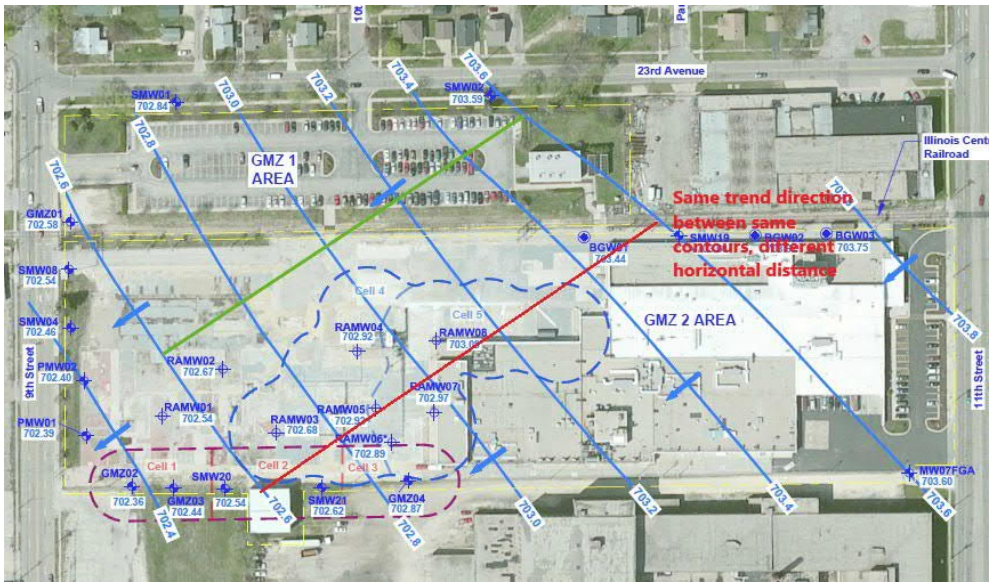
Response: Turning off the systems is not detailed in the work plans prior to leachate elevation collection. The systems are turned off for the following reasons: 1) to allow time for the pressure in the subsurface to dissipate to allow safe access to the monitoring wells when opening the expansion plugs, and 2) to allow time for the leachate elevation to not be influence by the systems at the time of field measurements.

Since June 2012, quarterly leachate elevation measurements have occurred during the pulse-off mode except for the first quarter monitoring events starting in 2014, in which case the systems were turned off three days in advance of starting the monitoring event. Turing the systems off three days in advance has been sufficient to allow for the effect of the systems on the leachate elevations to be insignificant. This determination was based on the general conformity of the relative leachate measurements and resulting flow direction when compared to leachate elevations measured during "pulse-off" periods.

Comment 8: ***Page 4-1. Paragraph 3**. **Sentence 2.** Consistency in analytical results is not a reliable indicator that the sample quality was not affected by not attaining the required water stabilization criteria. There is no expectation of consistent analytical results in an environmentally compromised groundwater system. The statement should be reworded.*

Response: The sentence has been removed.

Comment 9: ***Page 4-2. Paragraph 4 and Figures 3, 4, 5, 6.** Hydraulic gradients appear to have been computed from contours which presupposes the contours are precisely placed relative to the data. The position of the green line on the figures is subjective and could easily be moved to indicate the same directional trend in a different area but calculating to a different gradient magnitude because the gradient line would be*



longer or shorter (see red line in figure below). It is recommended that the calculation of gradients across this Site be computed between two wells, one upgradient and one downgradient, for consistency from period to period; perhaps MW203 and GMZ01 or other matched pair on opposite sides of the Site that represent the general direction of flow.

Response: Calculation of hydraulic gradient should be performed parallel to leachate flow direction. As the USEPA notes, different gradients can be calculated across the site depending on where the line is placed. The use of pre-determined matched monitoring wells does not take into account slight variation of leachate flow direction which would result in a gradient line that is not perpendicular to leachate flow direction. However, per USEPA request, the hydraulic gradient will also be calculated from the matched pair of monitoring wells, SMW19 and SMW20. These two wells are closely aligned with the leachate flow direction and located near the center of the site. As a result, they will provide a good representative location from which to calculate the hydraulic gradient at the Site.

The text in Section 4.3 of the Revised 2020 Report presents a summary of the hydraulic gradient calculation for each of the four sampling events using both the hydraulic gradient line shown in each potentiometric figure, as well as by the gradient between wells SMW19 and SMW20. The gradient across the site shows little variability over the four sampling events and using the two different methods.

Comment 10: ***Page 4-2. Paragraph 5.*** *Additional details of this analysis should be given. Questions that should be addressed at minimum include:*

- *Was the value obtained onsite from a pump test or aquifer materials analysis or from a remote location?*

Response: As detailed in the *August 2009 Remedial Action Investigation Report and Supplemental Remedial Design* (Stantec Report) (Stantec, 2009), the hydraulic conductivity of the sand aquifer was tested on April 29, 2009 with two slug tests completed on each of three HSC monitoring wells: RAWM05, SMW19, and SWM20.

- *What methods were used to obtain the hydraulic conductivity value?*

Response: The hydraulic conductivity was determined by the Bauer Rice method using AQTESOLVE software.

- *Was this hydraulic conductivity value from a single aquifer test (sample) or multiple aquifer tests (samples)?*

Response: The geometric mean of multiple slug out tests.

- *If multiple aquifer tests (samples), what was the range of hydraulic conductivity values?*

Response: The range was 2.18E-03 centimeters per second (cm/sec) to 3.79E-03 cm/sec.

- *What is the uncertainty of the hydraulic conductivity measurement?*

Response: The Stantec Report does not provide an estimate of uncertainty for the hydraulic conductivity measurements. The data was obtained using standard practice including slug tests and evaluated by the Bower Rice method using AQTESOLVE. The wells were all drilled using hollow stemmed augers and are constructed with 2-inch diameter, 15-foot long screens. SMW19 and SMW20 are constructed with stainless steel while RAMW05 is constructed with polyvinyl chloride. As documented in the Stantec Report, the hydraulic conductivity is based on multiple slug tests at each of the three wells noted above. Although no estimate of uncertainty is provided in the Stantec Report, the tests show a hydraulic conductivity range of 2.18E-03 to 3.79 E-03 cm/sec with a geometric mean of 2.89E-03 cm/sec. The reported hydraulic conductivity range and geometric mean appear consistent and are well within values presented in the Camp Dresser & McKee *Remedial Investigation Report* (CDM RI) (CDM, 1995) of 4.88E-05 to 2.93E-02 cm/sec. for the western portion of the unconsolidated aquifer and very close to the geometric mean of 1.19E-03 cm/sec.

- *What depth(s) does this hydraulic conductivity value apply to in relation to the depths of the well screens and suspected depths of occurrence of COCs?*

Response: The test monitoring wells are screened in the shallow aquifer to a depth of approximately 45 feet below the ground surface. These monitoring wells, along with the other HSC GMZ monitoring wells, are screened similarly in the shallow unconsolidated aquifer.

- *How was the effective porosity value obtained?*

Response: Bulk porosity was measured in eight samples as reported in the Stantec Report with values ranging from 36.5 to 42.2 percent (%). However, for the seepage velocity measurement an effective porosity value of 25% was used based on default values specified in the CDM RI.

- *What is the estimated error range for the seepage velocity considering the variation in the expected range of hydraulic conductivity and effective porosity in the aquifer material at the Site?*

Response: The estimated error is provided based on the range in seepage velocity, which is estimated using the minimum and maximum ranges of hydraulic conductivity and gradient. Using the minimum hydraulic conductivity value (2.18E-03 cm/sec) and gradient (0.0014 ft/ft) provides seepage velocity of approximately 13 feet per year (ft/yr), while using the maximum hydraulic conductivity value (3.79E-03 cm/sec) and gradient (0.0016 ft/ft) provides seepage velocity of approximately 25 ft/yr.

Comment 11: ***Page 4-2. Paragraph 6. Sentence 1.*** *Clarify in the text what "average leachate elevation" means since it is not explained. Uncertainty in the sentence arises because the average of the water level elevations at the Site and the average elevation of the water level at the Site are two different things. The "Ave. GW Elev." from Table 1 appears to be the average of the water level elevations at all the wells at the Site. Please note that the "Ave. GW Elev." is strongly influenced by the spatial distribution of the data points and does not necessarily represent the "overall" average of the water level at the Site.*

Response: The average leachate elevation is of all the monitoring wells. The text has been clarified.

Comment 12: ***Page 4-2. Paragraph 6. Sentence 2.*** *Reword this sentence as it is not clear how the overall average was computed. Is this the average of the quarterly averages in 2019 compared to the average of the quarterly averages in 2020?*

Response: The four quarterly events in 2019 were averaged and compared to the four quarterly events in 2020 that were averaged. The text has been clarified.

Comment 13: ***Page 5-1. Paragraph 4.*** *A total of 8.5 pounds of volatile organic compounds (VOCs) were removed using the AS/SVE system in 2020 which represents about 0.45% of the total. This seems like substantial mass is still being removed under the current (2020) operational parameters for the system.*

Response: There continues to be detectable concentrations (generally detected below the PRGs) of contaminants in leachate within the apparent influence of the remediation systems. As such, the remediation systems will continue to remove mass from the leachate and to some extent, the shallow fine-grained soils, which the soil vapor extraction (SVE) component may have limited affect.

Comment 14: ***Page 6-1. Paragraph 4. Sentence 1****. This sentence leads one to interpret the statements around the removal rates and total mass removed as estimated minimums, please state this in the report as such.*

Response: The sentence states that the removal rates may be slightly underestimated based on the sample collection timing. Alternatively, the removal rates may be slightly higher based on the sample collection timing. It is assumed that the former is occurring; however, the difference is likely not significant and would not warrant a detailed evaluation.

Comment 15: ***Page 6-2. Paragraph 6.*** *This statement is too concrete. It implies that the AS/SVE system is no longer capable of any additional VOC removal. Yet a minimum of 8.5 pounds was removed in 2020 representing of 0.45% of the total mass removed by the system. Please replace "at the end" with "nearing the end".*

Response: The text has been revised.

Comment 16: ***Page 6-3. Paragraph 4 and Table 8****.*

a. *The data in Table 8 and the discussion in the Statistical Analysis section need to be clarified to better understand which of the tests shown represent statistically significant tests. Please note, that statistical tests such as Mann-Kendall are most useful when other less rigorous analyses, such as visual interpretation of time series plots and Lowess curves are used in concert with the statistical analyses.*

Response: Additional discussion and analysis has been included in the Section 6.4 Statistical Analysis in the Revised 2020 Report.

b. *Provide (e.g., in an Appendix) the dataset used to produce Table 8. The reader should be able to verify these results.*

Response: The data sets and outputs of the analysis are provided in Appendix G of the Revised 2020 Report.

c. *In the text and Table 8 provide the p-value of the test and the chosen alpha value. The p- value that is associated with the statistic is of primary concern and indicates if the trend is or is not significant. P-values should be listed for each test and the threshold of significance (usually chosen to be 0.05 or 0.01) should not vary for the analysis.*

Response: The additional discussion and analysis in Section 6.4 of the Revised 2020 Report clarifies the chosen alpha value and the p-value threshold.

d. *The difference between 'Stable' and 'No Trend' should be described in both the text and table notes.*

Response: The difference between 'Stable' and 'No Trend' is described in both the revised text and table notes in Section 6.4 of the Revised 2020 Report.

e. *Please provide in the text the software name and the selected 40 data points used in the analysis.*

Response: The software used for the analysis (ProUCL 5.1) is mentioned in Section 6.4 of the Revised 2020 Report. The data series are provided in Appendix G.

f. *Provide information in the text regarding if 40 points represent the whole dataset or is it a subset? How were censored values (values less than the laboratory reporting level) handled in the analysis? How were ties (which censored values would likely be classified as since they are all the same value) handled as ties in ranked data often pose problems in nonparametric analyses.*

Response: The revised text clarifies that the 40 data points represent the data set since March 2011 (after the startup of the Phase 2 air sparge and soil vapor extraction system) and how censored values were handled in the analysis (i.e., considered detects at the detection limit).

The Mann-Kendall test compiles all possible pairs of measurements in the time series and assigns a score based on their difference:

1) If the earlier measurement is less in magnitude than the later measurement, then that pair is assigned a score of 1;
2) If the earlier measurement is greater in magnitude than the later measurement, then that pair is assigned a score of –1; and
3) Pairs with identical measurement values are assigned a score of 0.

The S-statistic is then computed as the sum of these scores. Greater negative values of S suggest a decreasing trend and greater positive values of S suggest an increasing trend. Values of S close to zero suggest no trend. An increasing presence of non-detects would serve to drive the analysis more toward an evidence of no trend (since there would be more zero scores). The test would return a similar result if detection limits were lower to reveal these results to be low-level detections. The difference between pairs of these results would be small, pushing the value of S closer to zero and a conclusion of no trend. This feature of the Mann-Kendall test makes it a very useful and applicable test for both full data sets and those containing non-detects, which is one reason why it was chosen as the primary trend test for data analysis.

Comment 17: ***Page 6-3. Paragraph 4. Last Sentence.*** *Please clarify this sentence. What trends are referred to here? Were the Mann-Kendall tests rerun with data from the listed years and find the same result? Was this statistic run in 2012….2019 and reported in the previous annual reports?*

Response: The sentence refers to the Mann-Kendell analysis that was completed as part of the previous annual reports for the years noted.

Comment 18: ***Page 8-1. Paragraph 1. Sentence 1****. It is unclear (and potentially misleading) how in the opening sentence to the Conclusions section the report states that, "…leachate COC concentrations within the defined "source areas" are below PRGs within the GMZ", when GMZ01, SMW08, SMW04, PMW02, and PMW01 all had concentrations greater than the MCL/PRG for all sampling quarters except in December 2020 for PMW02. Perhaps there is an alternate meaning to "defined source areas", although EPA interpreted this phrase to mean SA 9/10 is a defined source area within Operable Unit 3. Please clarify the text.*

Response: The statement is referencing the "sources areas" defined in the Final Supplemental Phase 2 AS/SVE System Design (Stantec, 2010) as leachate with contaminant detected at concentrations equal or exceeding the PRGs by two orders of magnitude. This design criteria were applied within the HSC property, which is also referenced as the "Facility". For clarity, the Revised 2020 Report references these areas as "Facility source areas".

Comment 19: ***Page 8-1. Paragraph 3. Sentence 1****. This statement seems subjective without including a before and after delineation of contamination. Please include the original and current aerial extent of the VOC leachate.*

Response: The original and current aerial extent of COCs in leachate have been included in the Revised 2020 Report as Figure 16 and 17, respectively.

Comment 20: ***Page 8-1. Paragraph 3. Last Sentence.***

a. *Remove the word "only".*

Response: The word has been removed.

b. *Please revise, as the sum of Phase 1 and Phase 2 mass for 2020 is 1.6 + 6.9 = 8.5 pounds.*

Response: The sum has been revised.

c. *Please clarify, as EPA was of the understanding that the SVE system is designed to remove VOCs from the soils in the unsaturated zone in the AS/SVE system area of influence, and not specifically from groundwater/leachate.*

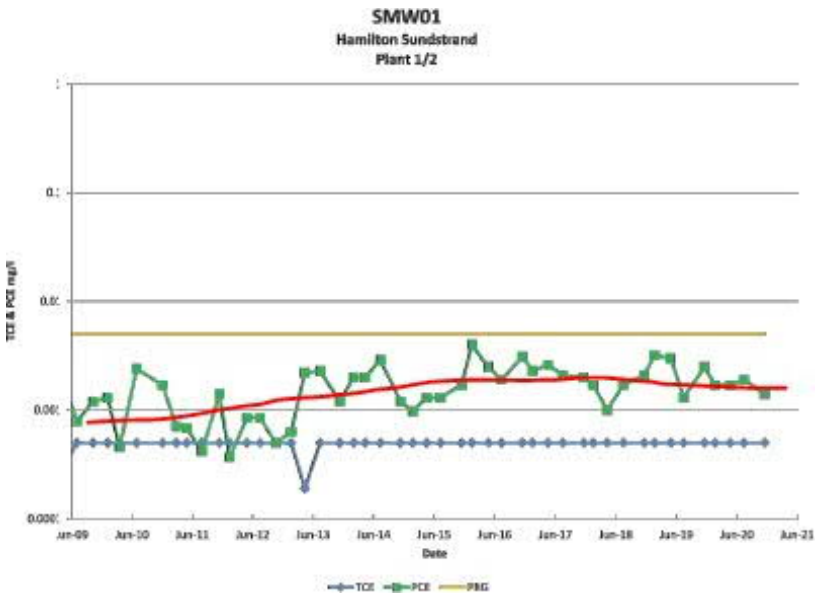
Response: The SVE is intended to collect contaminants released from the leachate and the contaminants in the unsaturated soils that are under the influence of the SVE.

Comment 21: ***Page 8-1. Paragraph 5.***

a. *This paragraph should be reworded according to revisions rendered to the trend analyses as stated in previous comments, as applicable. Also note that 'Stable' and 'No Trend' are not synonymous with 'asymptotic'.*

Response: The wording on Page 8-1, Paragraph 5 remains aligned with the further data characterization and analysis performed. While "Stable", "No Trend", and "Asymptotic" may not have the same exact meaning, they do have the same intent when applied to environmental cleanup; that the concentrations of a constituent are expected to be relatively consistent on average over the long term.

b. *Last Sentence. This statement appears to be overconfident. When taken in shorter periods of time, there are multiple increasing trends in the time series data. Also, SMW01 shows an increasing trend in PCE in the overall time series plot (see plot below). For further clarification see EPA's 1Q 2021 Comment Letter (General Comment #3) regarding trend interpretation(s). Furthermore, how are conditions downgradient improving as downgradient of the western GMZ 1 and 2 boundary, sample results are not presented/assessed?*



Response: Taking the data series in shorter periods of time and focusing on periods of increase incompletely characterizes these data. For the SMW01 example, taken in shorter periods of time, the most recent time periods show stable and decreasing trends in the time series data. The red line drawn in the plot suggests a slight increase up to June 2015, but then suggests relative stability through June 2018 and then a slight decrease from June 2018 through the present. Taken as a whole, the SMW01 PCE data show concentrations that are below the PRG and indicate increasing concentrations were a previous

and temporary phenomenon. The last 6 years of data indicate SMW01 PCE concentrations remain below the PRG and are stable or decreasing.

Furthermore, monitoring well SMW01 is a cross-gradient well and is not located within the HSC facility. Impacts at this well are not related to the HSC facility.

The monitoring well closest downgradient of the western property boundary is MW-124 included as part of the City of Rockford monitoring network. As reported in the June 2020 *Groundwater Monitoring Report (*NES, 2020*)* prepared for the City of Rockford, total volatile organic compounds are trending down in monitoring well MW-124.

Comment 22: ***Page 8-2. Paragraph 2.*** *Please remove this text. This information was already presented in the Introduction and does not need to be reiterated in a Conclusions section.*

Response: The text has been removed.

Comment 23: ***Page 8-2. Paragraph 3.*** *Please remove this text. This information is documented in other deliverables (ACL Work Plan) and is described in the Introduction. However, EPA raises significant concerns about the conceptual site model that indicates most of the SA 9/10 VOC mass is being remediated by the AS/SVE system. This does not seem to be the case as witnessed by the sustained PCE concentrations along the western GMZ boundary in GMZ01, SMW08, and SMW04 since remediation/monitoring commenced in addition to what appears to be PCE contaminated soils left in place at least within the OSA investigation area at the depths where groundwater flows and is also outside the AS/SVE area of influence for these wells.*

It seems that a comprehensive description of the wells along the western boundary compared to MCLs/PRGs and proximity to AS/SVE system affects and the OSA should be summarized in this section instead of presenting a hypothetical result.

Response: The text has been removed. Please note the response to comment #2 that a Preliminary CSM has been provided to USEPA to better understand the potential areas of concern that could be contributing to detections of contaminants in leachate in the areas discussed in the comment.

Comment 24: ***All Figures.*** *The symbols for BGW01, BGW02, and BGW03 should be included on the figure legend.*

Response: The symbol has been added to the figures.

Comment 25: ***Figure 3.*** *Water-level values for wells SMW01 and SMW02 do not match the contours as drawn. It appears that SMW02 was indicated as anomalous (asterisk appears next to the name in the figure) but SMW01 was not. These water levels appear in Table 1 as different values and the table does not indicate that they are anomalous. What was the justification that the water-level for SMW02 was anomalous? Values in Table 1 and Figures 3 through 6 should be verified and recontoured as appropriate.*

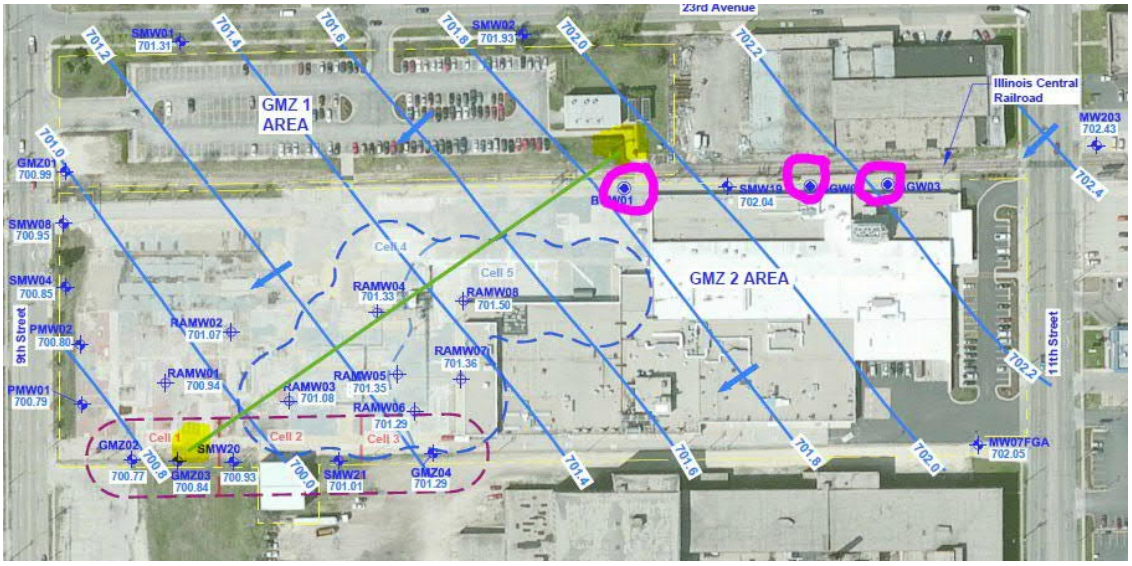
Response: Figure 3 has been revised with the correct leachate elevation for SMW01 and SMW02 in the Revised 2020 Report. The leachate elevations are not anomalous and so notations to that affect have been removed. In addition, Figure 4 through Figure 6 were also checked and revised as appropriate in the Revised 2020 Report.

Comment 26: ***Figure 6.***

a. *Wells BGW01, BGW02, and BGW03 have no data in the figure, and this is not discussed in the text. The values for these wells can be found on Table 1. Please explain and include the data.*

Response: These three upgradient wells were installed to provide additional leachate data migrating onto the HSC property. The wells were installed (screened in the shallow aquifer) in December 2010. Wells BGW01 and BGW02 were sampled once in December 2010 and well BGW03 was sampled once in March 2011. The leachate data for all wells was below the PRGs. Leachate elevations are measured in these wells for use in the potentiometric figures. The figure has been revised to include the data.

b. *"Gradient calculation line" appears to be misplaced with endpoints between contours (which is different than this line as it appears on Figures 3, 4, & 5).*



Response: In accordance with the response to Comment 9, the hydraulic gradient lines on Figure 3 through Figure 6 have been revised to be positioned more central to the site and to transect the site and aligned with the inferred leachate gradient. The hydraulic gradient calculations from these lines are summarized in Section 4.3 of the Revised 2020 Report. In addition, hydraulic gradient calculations have been made using the matched monitoring wells SMW19 and SMW20, which are positioned nearly perpendicular to the inferred leachate potentiometric contour lines across the central portion of the site.

Please contact either of the undersigned with any questions you may have on the responses we have provide to your comments.

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